

REMARKS

The present communication responds to the Office Action dated August 22, 2005. In that Office Action, it was indicated that restriction was required. The Examiner identified two invention groups:

Group I (claims 1-18) drawn to a vacuum system and a connector used therewith;
and

Group II (claims 19 and 20) drawn to a method of calculating liquid information.

In response to the restriction requirement, the Applicants elect the invention of Group I (claims 1-18) drawn to a vacuum system and a connector used therewith. Claims 19 and 20 are cancelled from the application.

Additionally, in that Office Action, the Examiner rejected claims 1, 3, 5-7 and 10-12 under 35 U.S.C. § 102(b). The Examiner further rejected claims 2, 4, 8, 9 and 13-18 under 35 U.S.C. § 103(a). The Applicants have herewith amended claims 1 and 13. No new matter has been added by these amendments. Claims 1-18 are pending. In view of the amendments and the following remarks, the Applicants respectfully request reconsideration and allowance of the pending claims.

Rejection Under 35 U.S.C. § 102(b)

Claims 1, 3, 5-7 and 10-12 are Not Anticipated by Paul

Claims 1, 3, 5-7 and 10-12 are rejected under 35 U.S.C. § 102(b) as being anticipated by Paul (U.S. Patent No. 5,264,026 A). The Applicants respectfully disagree.

A rejection under § 102 requires that each and every limitation of the claimed invention be disclosed in a single prior art reference. In other words, there must be no difference between the claimed invention and the prior art reference disclosure as viewed by a person of ordinary skill in the art.

Claim 1 is Not Anticipated by Paul

Claim 1, as amended, is directed to a vacuum connector having an inlet, an outlet, a separation chamber, an air pathway and a fluid pathway. The vacuum connector is “proximate the point of use of a vacuum tool and adapted to be connected to a vacuum source.”

Paul, in contrast, fails to teach or suggest a vacuum connector, which includes a separation chamber, that is proximate the point of use of a vacuum tool. Rather, Paul discloses a centralized evacuation system. (*Paul, Abstract*). The Paul system is centralized in the sense that the components of the system, including a centrifugal separator tank, are located in a mechanical room that is removed from, or remote with respect to, the operating rooms using the system. (*Paul, col. 2, ll. 60-65; col. 3, ll. 13-17; col. 6, ll. 3-9; figs. 1 and 2*). Use of the central components of the Paul evacuation system is available only through flexible tubing located at the operating rooms, then through a branch of the central main line and finally through the main line itself. (*Paul, col. 4, ll. 28-42; col. 5, ll. 56-61*). In other words, debris from all operating rooms employing the system are collected and combined together in the main line. Only after all the debris from each operating room is combined are the solid and liquid wastes separated from the gases in the centrifugal separator.

Furthermore, the system disclosed in Paul is merely one embodiment of a vacuum source that may be used in conjunction with the present invention. The present application, on page 9, explains:

In one embodiment, the present invention may be adapted to provide several suction or vacuum related functions . . . accomplished by providing a connector structure which connects a single central vacuum system of the type disclosed in U.S. Patent 5,264,026 [(Paul)] to various end effectors or working tools . . .

Nothing in Paul teaches or suggests that the invention disclosed in Paul further includes a connector structure which connects its central components to end effectors or working tools, wherein the connector structure is proximate the point of use of a vacuum tool and includes a separation chamber. Thus, Paul fails to teach or suggest the invention of claim 1. Reconsideration and withdrawal of the rejection is respectfully requested.

Claims Depending from Claim 1 Are Not Anticipated by Paul

Claims 3, 5-7 and 10-12, which depend directly from claim 1, incorporate all the limitations of claim 1 and are, therefore, also not anticipated by Paul.

Rejection Under 35 U.S.C. § 103(a)

Claims 9 and 13 Are Not Made Obvious by Paul in View of Schultz

Claims 9 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Paul as applied to claims 1, 3, 5-7 and 10-12 above, in view of Schultz et al. (U.S. Patent No. 4,921,492). The Applicants respectfully disagree.

Claim 9 is Not Made Obvious by Paul in View of Schultz

As noted above, claim 1, from which claim 9 depends, is directed to a vacuum connector having an inlet, an outlet, a separation chamber, an air pathway and a fluid pathway. The vacuum connector is “proximate the point of use of a vacuum tool and adapted to be connected to a vacuum source.”

Neither Paul nor Schultz, alone or in combination, teach or suggest the invention of claim 1. As discussed above, Paul fails to teach or suggest a vacuum connector, which includes a separation chamber, that is proximate the point of use of a vacuum tool. Rather, in Paul, the central components of the system, including the centrifugal separator tank, are located in a mechanical room that is removed from, or remote with respect to, the operating rooms using the system. Debris from all operating rooms employing the system are collected and combined together in the main line before separation of the solid and liquid wastes from the gases.

Schultz fails to remedy the deficiencies of Paul. Schultz discloses an end effector for removing the gaseous byproducts of laser surgery from a surgical site. (*Schultz, Abstract*). Schultz does not teach or suggest a vacuum connector, which includes a separation chamber, that is proximate the point of use of a vacuum tool. Schultz merely discloses one embodiment of a vacuum tool that may be used with the present invention.

Thus, for at least these reasons, neither Paul nor Schultz, alone or in combination, teach or suggest the invention of claim 1 or of dependent claim 9. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the obviousness rejection of pending claim 9.

Claim 13 is Not Made Obvious by Paul in View of Schultz

Claim 13, as amended, is directed to a vacuum system having a vacuum source, a connector and an end effector. The connector is “proximate the point of use of a vacuum tool” and includes an inlet, an outlet, a separation chamber, an air pathway and a fluid pathway.

Neither Paul nor Schultz, alone or in combination, teach or suggest the invention of claims 13. As discussed above in relation to the rejection of claim 1, Paul fails to teach or suggest a connector, which includes a separation chamber, that is proximate the point of use of a vacuum tool. Rather, Paul discloses a centralized evacuation system that is merely one embodiment of a vacuum source that may be used in conjunction with the present invention.

Schultz fails to remedy the deficiencies of Paul. As discussed above, Schultz merely discloses an end effector for removing the gaseous byproducts of laser surgery from a surgical site. Schultz does not teach or suggest a connector, which includes a separation chamber, that is proximate the point of use of a vacuum tool. Schultz merely discloses one embodiment of a vacuum tool that may be used with the present invention.

Thus, for at least these reasons, neither Paul nor Schultz, alone or in combination, teach or suggest the invention of claim 13. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the obviousness rejection of pending claim 13.

Claims 2, 4 and 8 Are Not Made Obvious by Paul in View of Goosen

Claims 2, 4 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Paul as applied to claims 1, 3, 5-7 and 10-12 above, in view of Goosen (U.S. Patent No. 5,019,060). The Applicants respectfully disagree.

As noted above, claim 1, from which claims 2, 4 and 8 depend, is directed to a vacuum connector having an inlet, an outlet, a separation chamber, an air pathway and a fluid pathway. The vacuum connector is “proximate the point of use of a vacuum tool and adapted to be connected to a vacuum source.”

Neither Paul nor Goosen, alone or in combination, teach or suggest the invention of claim 1. As discussed above, Paul fails to teach or suggest a vacuum connector, which includes a separation chamber, that is proximate the point of use of a vacuum tool.

Goosen fails to remedy the deficiencies of Paul. Goosen discloses a liquid collection device for use with surgical procedures to control and monitor the rate of liquid flow from body cavities of a patient. (*Goosen, col. 2, ll. 47-51*). Goosen discloses upper and lower liquid accumulation chambers that monitor the flow rate. (*Goosen, col. 2, ll. 57-59*). However, Goosen does not teach or suggest a vacuum connector, which includes a separation chamber, that is proximate the point of use of a vacuum tool.

Thus, for at least these reasons, neither Paul nor Goosen, alone or in combination, teach or suggest the invention of claim 1 or of dependent claims 2, 4 or 8. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the obviousness rejection of pending claims 2, 4 and 8.

Claims 14-18 Are Not Made Obvious by Paul in View of Schultz and Goosen

Claims 14-18 rejected under 35 U.S.C. § 103(a) as being unpatentable over Paul and Schultz et al. as applied to claims 9 and 13 above, in further view of Goosen. The Applicants respectfully disagree.

As noted above, claim 13, from which claims 14-18 depend, is directed to a vacuum system having a vacuum source, a connector and an end effector. The connector is “proximate the point of use of a vacuum tool” and includes an inlet, an outlet, a separation chamber, an air pathway and a fluid pathway.

None of Paul, Schultz nor Goosen, alone or in combination, teach or suggest the invention of claim 13. As discussed above, Paul fails to teach or suggest a connector, which

includes a separation chamber, that is proximate the point of use of a vacuum tool. Rather, Paul discloses a centralized evacuation system that is merely one embodiment of a vacuum source that may be used in conjunction with the present invention.

Schultz fails to remedy the deficiencies of Paul. As discussed above, Schultz merely discloses an end effector for removing the gaseous byproducts of laser surgery from a surgical site. Schultz does not teach or suggest a connector, which includes a separation chamber, that is proximate the point of use of a vacuum tool. Schultz merely discloses one embodiment of a vacuum tool that may be used with the present invention.

Goosen fails to remedy the deficiencies of Paul. Goosen discloses a liquid collection device for use with surgical procedures to control and monitor the rate of liquid flow from body cavities of a patient. Goosen does not teach or suggest a vacuum connector, which includes a separation chamber, that is proximate the point of use of a vacuum tool.

Thus, for at least these reasons, none of Paul, Schultz nor Goosen, alone or in combination, teach or suggest the invention of claim 13 or of dependent claims 14-18. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the obviousness rejection of pending claims 14-18.

CONCLUSION

No additional claim fees should be generated by this paper. However, the Commissioner is hereby authorized to charge any fee deficiency associated with this paper to Deposit Account No. 04-1420.

The application now stands in allowable form, and reconsideration and allowance are respectfully requested.

Respectfully submitted,

DORSEY & WHITNEY LLP
Customer Number 25763

Date:

November 22, 2005

By:



David E. Bruhn, Reg. No. 36,762
(612) 340-6317